

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In Re Application of:

Skidmore, *et al.*

Serial No.: 10/632,491

Filed: July 31, 2003

Confirmation No.: 4397

Group Art Unit: 1732

Examiner: Daniels, Matthew J.

Docket No. 190514-1020

For: **Masonry Unit Manufacturing Method**

AMENDED APPEAL BRIEF UNDER 37 C.F.R. §41.37(d) AND MPEP 1205.03

Mail Stop Appeal Brief - Patents:
Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This is an amended Appeal Brief responsive to the Notification of Non-Compliant Appeal Brief (herein, "Notification") mailed on May 29, 2007, which alleged that the brief does not present an argument under a separate heading for each ground of rejection on appeal. Applicants appreciate the suggestions made in the Continuation Sheet (PTOL-462) of the Notification, and accordingly, have made amendments to Sections VI and VII that Applicants believe are consistent with those suggestions and remedy any alleged deficiencies of the Appeal Brief filed on March 19, 2007. Additionally, Applicants have included outline letters (e.g., "A," "B," "C," etc.) and citations to the applicable art references in the heading of each separately argued section in Section VII. Entry of the aforementioned amendments and reconsideration is respectfully requested.

I. REAL PARTY IN INTEREST

The real party in interest is E. Dillon & Company, a corporation established under the laws of the State of Virginia and having a principal place of business at Route 1, Box 800, Swords Creek, Virginia 24649, U.S.A.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 1-5, 7-20, and 22-24 are pending in the present application. Through prosecution of this matter, claims 6 and 21 have been canceled without prejudice, waiver, or disclaimer. Claims 1-5, 7-20, and 22-24 were rejected by the FINAL Office Action and are the subject of this appeal. An Advisory Action, dated December 19, 2006, affirmed the rejections.

IV. STATUS OF AMENDMENTS

No amendments have been made or requested since the mailing of the FINAL Office Action and all amendments submitted prior to the FINAL action have been entered. A copy of the currently pending claims is attached hereto as Appendix, section IX.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Embodiments of the claimed subject matter are illustrated in FIGs. 1-15B and are discussed in the specification at least at pages 5-21.

Embodiments of the claimed subject matter, such as those defined by claim 1, define a method for forming a masonry unit (see, *e.g.*, FIGS. 1 and 2, reference numerals 100 and 200, and page 7, lines 10 – page 8, line 23), said method (FIG. 12, page 20, lines 3-9)

comprising the steps of: raising a pallet (see, e.g., FIGS. 4A, 4B, 4F, and 4H, reference numeral 442, and page 12, line 4 – page 13, line 7) to a bottom surface of a mold (see, e.g., FIGS. 4A-4D, 4F-4H, reference numeral 430, and page 12, line 24 – page 13, line 7) (FIG. 12, reference numeral 1202, page 20, line 5); inserting a filler plug (see, e.g., FIGS. 3B, 4A, 4C, 4G, 5A, 5B, and 10A, 10C, 11A, reference numerals 352 and 552, and page 10, lines 17 – 19, page 12, lines 2 – 28, page 14, lines 14 - 21, page 18, line 10 – page 20, line 2) into the side of the mold between a partition plate (see, e.g., FIGS. 5A, 7A, 7B, 11A, reference numerals 534, 534a, 534b, and page 14, lines 5 – 12, page 16, line 25 – page 17, line 8, page 19, lines 11-18) and a pallet (see, e.g., FIGS. 4A, 4B, 4F, and 4H, reference numeral 442, and page 12, line 4 – page 13, line 7) (FIG. 12, reference numeral 1204, page 20, lines 6-7); dispensing mix (see, e.g., FIG. 4A, represented by dots in the hopper 312, page 10, line 8, page 12, lines 9-12) into the mold (FIG. 12, reference numeral 1206, page 20, line 7); compressing the mix with a shoe (see, e.g., FIG. 5A and 6A, reference numeral 560, and page 13, lines 10 – 27, page 14, line 22 – page 15, line 14) (FIG. 12, reference numeral 1208, page 20, lines 7-9); and responsive to the compressing, forming a filler plug effect (see, e.g., FIGS. 1 and 2, reference numerals 102 and 202, and page 7, line 13 – page 8, line 18) in the compressed mix whereby a masonry unit (see, e.g., FIGS. 1 and 2, reference numerals 100 and 200, and page 7, lines 10 – page 8, line 23) having a filler plug effect is provided.

Embodiments of the claimed subject matter, such as those defined by claim 7, further define the method of claim 1, wherein the step of forming further includes forming a substantially constant angle of inclination (see, e.g., FIGS. 1, 6A, and 11A, reference numerals 102, 103, 105, 107, alpha and beta, and page 7, line 10 – page 8, line 3, page 15, lines 19 – 28, page 19, lines 9-26) between a front surface (see, e.g., FIG. 1, reference numeral 108, and page 7, line 16) and opposing side surfaces (see, e.g., FIG. 1, reference numerals 104, 106, and page 7, line 15), a top surface (see, e.g., FIG. 1, reference numeral

114, page 7, line 21), and a bottom surface (see, e.g., FIG. 1, reference numeral 116, page 7, line 21) of the compressed mix corresponding to a masonry unit (see, e.g., FIGS. 1 and 2, reference numerals 100 and 200, and page 7, lines 10 – page 8, line 23) to be formed by compressing the mix with the shoe against opposing side gussets (see, e.g., FIGS. 5A, 7A, and 7B, reference numerals 536a-536d, and page 14, lines 10-15, page 16, line 24 – page 17, line 16) and the filler plug.

Embodiments of the claimed subject matter, such as those defined by claim 8, wherein the compressing the mix with the shoe against opposing side gussets and the filler plug includes compressing the mix with an angular surface (see, e.g., FIG. 6A, reference numeral beta, and page 15, lines 19 – 28) of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug (see, e.g., FIG. 11A, reference numerals 571, 556, and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 9, wherein the compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with an approximately 30 degree angled surface referenced from a bottom surface of the filler plug (see, e.g., FIG. 11A, reference numeral alpha, and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 10, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with an angular range of approximately 10-60 degrees, the range referenced from a bottom surface of the filler plug (see, e.g., FIG. 11A, reference numeral alpha, and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 11, wherein compressing the mix with an angular surface of the shoe against an angular surface

of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with a width of approximately $7/32$ inch (see, e.g., FIG. 11A, reference numeral W, and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 12, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with a width in the range of approximately $1/16$ inch – $1/2$ inch (see, e.g., FIG. 11A, reference numeral W, and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 13, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with an angle of approximately 30 degrees (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28).

Embodiments of the claimed subject matter, such as those defined by claim 14, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with an angle in a range of approximately 10-60 degrees (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28).

Embodiments of the claimed subject matter, such as those defined by claim 15, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with a width in the range of approximately $1/16$ inch – $1/2$ inch (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28).

Embodiments of the claimed subject matter, such as those defined by claim 16, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with a width of approximately $\frac{7}{32}$ inch (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28).

Embodiments of the claimed subject matter, such as those defined by claim 17, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with an angle of approximately 30 degrees (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28 and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 18, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with an angle in a range of approximately 120 – 170 degrees (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28 and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 19, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with a width in the range of approximately $\frac{1}{16}$ inch – $\frac{1}{2}$ inch (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28 and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 20, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the

angled surface between the front and side surfaces of the compressed mix with a width of approximately 7/32 inch (see, e.g., page 7, line 10 – page 8, line 3, page 15, lines 19 – 28 and page 19, lines 9-26).

Embodiments of the claimed subject matter, such as those defined by claim 22, wherein the step of inserting a filler plug includes the step of inserting a plurality of filler plugs substantially simultaneously (see, e.g., FIGS. 3B, 4A, 4C, 4G, 5A, 5B, and 10A, 10C, 11A, reference numerals 352 and 552, and page 10, lines 17 – 19, page 12, lines 2 – 28, page 14, lines 14 - 21, page 18, line 10 – page 20, line 2).

Embodiments of the claimed subject matter, such as those defined by claim 23, further including forming a bottom corner bevel in the compressed mix corresponding to at least one of a segmented retaining wall block, a concrete masonry unit, and an architectural concrete masonry unit by using a “T” portion (see, e.g., FIGS. 15A-15B, reference numerals 1502a, 1502b, and page 21, lines 12 – 19) of the filler plug, the “T” portion having a beveled surface (see, e.g., FIGS. 15A-15B, reference numerals 1506, and page 21, lines 12 – 19).

Embodiments of the claimed subject matter, such as those defined by claim 24, define a method for forming a masonry unit (see, e.g., FIGS. 1 and 2, reference numerals 100 and 200, and page 7, lines 10 – page 8, line 23), said method (FIG. 12, page 20, lines 3-9) comprising the steps of: raising a pallet (see, e.g., FIGS. 4A, 4B, 4F, and 4H, reference numeral 442, and page 12, line 4 – page 13, line 7) to contact a bottom surface of a mold (see, e.g., FIGS. 4A-4D, 4F-4H, reference numeral 430, and page 12, line 24 – page 13, line 7) having gussets (see, e.g., FIGS. 5A, 7A, and 7B, reference numerals 536a-536d, and page 14, lines 10-15, page 16, line 24 – page 17, line 16) connected to internal surfaces of the mold (FIG. 12, reference numeral 1202, page 20, line 5); inserting a plurality of filler plugs (see, e.g., FIGS. 3B, 4A, 4C, 4G, 5A, 5B, and 10A, 10C, 11A, reference numerals 352 and 552, and page 10, lines 17 – 19, page 12, lines 2 – 28, page 14, lines 14 - 21, page 18, line 10 – page 20, line 2) substantially simultaneously into the side (see, e.g., FIG. 7A,

reference numeral 538a, 538b, and page 16, lines 18-22) of the mold between a plurality of partition plates (see, e.g., FIGS. 5A, 7A, 7B, 11A, reference numerals 534, 534a, 534b, and page 14, lines 5 – 12, page 16, line 25 – page 17, line 8, page 19, lines 11-18) and the pallet (see, e.g., FIGS. 4A, 4B, 4F, and 4H, reference numeral 442, and page 12, line 4 – page 13, line 7) (FIG. 12, reference numeral 1204, page 20, lines 6-7); dispensing mix (see, e.g., FIG. 4A, represented by dots in the hopper 312, page 10, line 8, page 12, lines 9-12) into the mold (FIG. 12, reference numeral 1206, page 20, line 7); compressing the mix with a shoe (see, e.g., FIG. 5A and 6A, reference numeral 560, and page 13, lines 10 – 27, page 14, line 22 – page 15, line 14) (FIG. 12, reference numeral 1208, page 20, lines 7-9); and responsive to the compressing, forming a plurality of beveled-edge surfaces (see, e.g., FIGS. 1 and 2, reference numerals 102, 103, 105, 107, and 202, 203, 205, and 207, and page 7, line 10 – page 8, line 3) on the compressed mix corresponding to a masonry unit (see, e.g., FIGS. 1 and 2, reference numerals 100 and 200, and page 7, lines 10 – page 8, line 23), the beveled-edge surfaces joining a front surface (see, e.g., FIG. 1, reference numeral 108, and page 7, line 16) to a top surface (see, e.g., FIG. 1, reference numeral 114, page 7, line 21), a bottom surface (see, e.g., FIG. 1, reference numeral 116, page 7, line 21), and side surfaces (see, e.g., FIG. 1, reference numerals 104, 106, and page 7, line 15).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The FINAL Office Action rejected claims 1-5 and 23 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Whissell* (“*Whissell*,” U.S. Pat. No. 4,802,836) in view of *Batlle* (“*Batlle*,” U.S. Pat. No. 5,358,214).

The FINAL Office Action rejected claims 7, 8, and 9-20 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Whissell* in view of *Batlle*, and further in view of *LaCroix* (“*LaCroix*,” U.S. Pat. No. 6,113,379) and *Stuckey* (“*Stuckey*,” U.S. Pat. No. 1,872,522).

The FINAL Office Action rejected claims 9-20 under 35 U.S.C. § 103(a) as allegedly

being unpatentable over *Whissell* in view of *Batlle*, and further in view of *LaCroix* and *Stuckey*, and further in view of *Knipper* ("*Knipper*," U.S. Pat. No. 3,509,250), *Rasmussen* ("*Rasmussen*," U.S. Pat. No. 2,475,435), and *Wittke* ("*Wittke*," U.S. Pat. No. 2,532,049).

The FINAL Office Action rejected claim 22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Whissell* in view of *Batlle*, and further in view of *Koyama* ("*Koyama*," U.S. Pat. No. 3,662,438).

The FINAL Office Action rejected claim 23 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Whissell* in view of *Batlle*, and further in view of *Knipper*, *Rasmussen*, and *Wittke*.

The FINAL Office Action rejected claim 24 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Whissell* in view of *Batlle*, *LaCroix*, *Stuckey*, and *Koyama*.

VII. ARGUMENT

Discussion of Art-Based Rejections Under 35 U.S.C. § 103(a)

The FINAL Office Action has rejected claims 1-5, 7-20, and 22-24 as allegedly unpatentable over the various combinations of references described in Section VI above. For at least the reasons set forth herein, Applicants respectfully disagree with the rejections and request that the rejections be overturned.

As has been acknowledged by the Court of Appeals for the Federal Circuit, the U.S. Patent and Trademark Office ("USPTO") has the burden under section 103 to establish a proper case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Accordingly, to make a proper case for obviousness, there must be a prior art teaching or established knowledge that would suggest to a person having ordinary skill in the pertinent art to fill the voids apparent in the applied reference. It is respectfully asserted that no such case has

been made in the outstanding FINAL Office Action.

A. Independent Claim 1, Dependent Claims 2-5 and 23 (*Battle* and *Whissell*)

Independent claim 1 recites (with emphasis added):

1. A method for forming a masonry unit, said method comprising the steps of:
 raising a pallet to a bottom surface of a mold;
 inserting a filler plug into the side of the mold between a partition plate and a pallet;
 dispensing mix into the mold;
 compressing the mix with a shoe; and
 responsive to the compressing, forming a filler plug effect in the compressed mix whereby a masonry unit having a filler plug effect is provided.

Applicants respectfully submit that the combination of references employed to reject independent claim 1 and dependent claims 2-5 and 23 are not obvious. One indication that the proposed combination is not obvious is that the proposed combination is improper. In particular, the FINAL Office Action improperly fails to enlist an “as a whole” analysis, and has also failed to show a proper motivation to combine *Whissell* and *Battle*. The FINAL Office Action provides the following on page 2:

Whissell appears to be silent to:

b) inserting a filler plug into the side of the mold between a partition plate and a pallet and c) a filler plug effect in the compressed mix whereby a masonry unit having a filler plug effect is provided.

However, *Battle* teaches inserting a filler plug into the side of the mold between a partition plate and a pallet and a filler plug effect in the compressed mix whereby a filler plug effect is provided (Fig. 5 and 2:46-49).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of *Battle* into that of *Whissell* for the following reasons:

a) *Battle* teaches that stripping of the part from a mold causes serious problems since the adherence thereof to the mold itself and to the strips causes stresses to be formed in precastings, causing deterioration thereof, which *Battle*’s method resolves b) *Battle* suggests use in precastings, and *Whissell*’s concrete blocks are considered to be precastings.

According to established case law, “Title 35, section 103, requires assessment of the invention as a whole. This “as a whole” assessment of the invention requires a showing that

an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner. *Princeton Biochemicals Inc. v. Beckman Coulter Inc.*, 75 U.S.P.Q.2d. 1051, 1054 (Fed. Cir. 2005). This showing has simply not been set forth.

The FINAL Office Action makes several statements as to the alleged problem Applicants' disclosure seeks to address. In particular, the FINAL Office Action states as follows (on page 10):

Applicant's remarks appear to assert that the combination is a combination of unrelated elements drawn together merely to meet the claimed steps. However, the passages from Batlle shown above clearly show comprehension of substantially the same problem addressed by Applicant and provide suggestion for the combination, namely to eliminate stresses (1:25-27).

Applicants respectfully disagree with this response on several levels. Briefly, the "as a whole" inquiry is based on 35 U.S.C. § 103(a), which recites as follows (emphasis added):

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

As explained in *Princeton Biochemicals Inc. v. Beckman Coulter Inc.*, 75 U.S.P.Q.2d. 1051, 1054 (Fed. Cir. 2005), "the 'as a whole' instruction in title 35 prevents evaluation of the invention part by part." (citing *Ruiz v A.B. Chance Co.*, 357 F.3d 1275 (Fed. Cir. 2004)) As further stated in *Princeton*, "[W]ithout this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component." (*Id.*, as to *Ruiz*). The court in *Princeton* explained that "[T]his line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. (*Id.*, as to *Ruiz*)

Applicants respectfully submit that the “as a whole inquiry” argument has not been rebutted/addressed properly in the Response to Arguments section (pages 9-12) of the FINAL Office Action nor has the improper response been remedied in the Detailed Action section in the balance of the FINAL Office Action, and hence Applicants’ maintain their position that an “as a whole” inquiry” has not be used in the examination. For instance, the FINAL Office Action appears to equate the elimination of stresses (page 10) as the “same problem addressed by Applicant.” To Applicants knowledge and belief, Applicants have never asserted during the prosecution of the application or within the application disclosure that the elimination of stresses is the problem to be addressed. This fact is relevant since it is clear from the recitations of *Princeton* (emphasis added) that this “as a whole” assessment “requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner.” *Princeton Biochemicals Inc. v. Beckman Coulter Inc.*, 75 U.S.P.Q.2d. 1051, 1054 (Fed. Cir. 2005). In fact, a brief review of Applicants’ disclosure would readily reveal that the alleged problem proffered by the FINAL Office Action indeed does not resemble in any form the technological problem to be overcome as provided in Applicants’ disclosure. Applicants’ disclosure is concerned with the technological innovation necessary to form a masonry unit with a filler plug effect and various bevels through a compression process. Applicants respectfully note that the same problem has not been set forth in any of the Office Actions.

The Advisory Action provides the following attempted rebuttal of the “as a whole” issue on page 3:

(a,d) the Examiner asserts that the motivation to combine has not been addressed, and that the rejection complies with the “as a whole” requirement.

Applicants respectfully submit that this statement is confusing and appears contradictory on its face. The “as a whole” requirement necessarily coincides with the motivation to combine

analysis, since such a requirement asks whether an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner.” To simply conclude that rejection complies with the “as a whole requirement” in the same sentence that includes a representation that the “motivation to combine has not been addressed” is contradictory, and again fails to properly refute/address Applicants assertion that the “as a whole” inquiry has not been properly met. For at least the reasons provided above, the “as a whole inquiry” has not been met as required, and thus Applicants respectfully submit that the rejections under 35 U.S.C. § 103(a) are improper and respectfully request that the rejections be overturned.

Additionally, Applicants note that the FINAL Office Action rebuttal to Applicants’ “as a whole” contention in section 9a of the FINAL Office Action involves the discussion of only a single reference, *Batlle*. In contrast, the statute (35 U.S.C. § 103(a)) requires an evaluation of “the differences between the subject matter sought to be patented and the prior art,” and the discussion of only *Batlle* (which does not disclose, teach, or suggest all of the claimed elements) used to specifically address in the Response to Arguments section Applicants’ argument that an “as a whole inquiry” has not been performed highlights the very concerns that *Princeton* addressed. For instance, *Batlle* fails to disclose, teach, or suggest a compression mold process. Clearly a skilled artisan addressing the problems presented in molding blocks through compression (*e.g.*, *Whissel*, assuming *arguendo Whissel* to perform compaction) will be presented with different problems than those where compression is not used (*e.g.*, *Batlle*).

In addition to the fact that *Batlle* does not disclose a compression process, unlike some of the art of record to which it is being combined, *Batlle* is deficient as a properly combinable reference in other ways. For instance, *Batlle* does not disclose, teach, or suggest **masonry units**. Applicants have provided several exemplary descriptions (shown below preceded by the

sections of the Applicants' disclosure in parenthesis) for masonry units, all of which are inconsistent with *Battle*'s disclosure:

(Page 1, lines 19-20 of the Applicants' disclosure) Masonry units include concrete masonry units and bricks that are stacked together and mortared to produce structures, such as building walls.

(Page 5, lines 18-29 of the Applicants' disclosure) Masonry units include concrete masonry units (CMUs) installed with mortar and other machine-manufactured products that are installed with mortar, such as fire-kilned, clay bricks, as well as bricks made with other constituents. Other embodiments include masonry units that are not installed with mortar. Further, CMUs included within the scope of the preferred embodiments of the invention include architectural concrete masonry units (ACMUs). ACMUs meet or exceed the structural specifications of CMUs in addition to including added aesthetic features, such as pigmentation, surface texture, fracturing, serrating, grinding, polishing, selection of aggregates, etc. CMUs or ACMUs that are used with mortar are to be distinguished from blocks used in segmented retaining walls (SRWs), which include landscape blocks and other blocks that are dry-stacked (e.g., installed without the use of mortar), and which also are included within the scope of the manufacturing methods of the preferred embodiments of the invention.

Further, and as mentioned above, *Battle* is not concerned with the technological innovation necessary to form a masonry unit with a filler plug effect and various bevels through a compression process. In contrast, and according to the FINAL Office Action, *Battle* is concerned with the elimination of stresses (page 10). Thus, a proper identification from Applicants' disclosure of the problem to be solved would clearly reveal that one or more of the proposed combinations could only be combined through hindsight reasoning.

Assuming *arguendo* that *Battle* addresses the problems associated with stripping a mold and *Whissell* addresses precastings as explained in the FINAL Office Action, such a recitation in the FINAL Office Action is irrelevant to an inquiry into what an artisan of ordinary skill in the art would do when confronted with the same problems as the inventor, or what would have motivated an artisan to combine the elements of claim 1, as explained above. Simply put, the FINAL Office Action fails to apply an "as a whole" assessment and fails to provide a motivation to combine. As expressed in *Yamanouchi Pharmaceutical Co. v. Danbury Pharmacal Inc.*, 231 F.3d 1339, 56 U.S.P.Q.2d 1641, 1644 (Fed. Cir. 2000),

“‘[V]irtually all [inventions] are combinations of old elements.’ Therefore, an Examiner [or accused infringer] may often find every element of a claimed invention in prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an Examiner [or accused infringer] to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat patentability of the claimed invention. To counter this potential weakness in the obviousness construct, the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.”

Thus, Applicants respectfully request that the rejection to claims 1-5 and 23 be overturned.

B. Claims 7, 8 and 9-20 (*Whissell, Battle, LaCroix, and Stuckey*)

Claims 7 and 8 recite (with emphasis added):

7. The method of claim 1, wherein the step of forming further includes **forming a substantially constant angle of inclination** between a front surface and opposing side surfaces, a top surface, and a bottom surface of the compressed mix corresponding to a masonry unit to be formed **by compressing the mix with the shoe against opposing side gussets** and the filler plug.

8. The method of claim 7, wherein the compressing the mix with the shoe against opposing side gussets and the filler plug includes **compressing the mix with an angular surface of the shoe** against an **angular surface of the opposing side gussets** and an angular surface of the filler plug.

As to claim 7, Applicants respectfully submit that the proposed combination of *Whissell, Battle, LaCroix, and Stuckey*, assuming *arguendo* a proper combination, fails to disclose, teach, or suggest “**opposing side gussets**” as provided in claim 7. The FINAL Office Action provides the following explanation with regard to side gussets (no emphasis added):

Applicant has not argued what opposing side gussets *are*, but only that LaCroix's features are not side gussets. The Examiner respectfully disagrees. Applicant's definition includes "triangular insert in a seam". LaCroix's Fig. 7, Item 14, clearly shows a triangular shape, and Applicant has not explained why this cannot be deemed to be the claimed element. Applicant's definition appears to be consistent with the Examiner's interpretation.

Applicants respectfully disagree that item 14 of *LaCroix* meets the exemplary definition provided in the non-final response (dated May 25, 2006) and the response after final (dated October 16, 2006) for gusset. The following is a reproduction of the exemplary Webster's dictionary definition for gusset provided in the aforementioned non-final response and the response after final (emphasis added) to support Applicants' assertion that *LaCroix* does not show a gusset:

- 1 : a usually diamond-shaped or triangular insert in a seam (as of a sleeve, pocketbook, or shoe upper) to provide expansion or reinforcement
- 2 : a plate or bracket for strengthening an angle in framework (as in a building or bridge)

As noted in the above definition, reference is made to a diamond shaped or triangle "insert." In contrast, the *LaCroix* reference, and in particular, item 14 of Fig. 7, shows a "division" 14 as an integral part of the mold, not an "insert" as that term is commonly understood. Applicants respectfully submit that to call the mold or any portion thereof a "gusset" would eviscerate the plain and ordinary meaning of the term "gusset."

The Advisory Action (mailed December 19, 2006) replies on page 3, section 2(b) that "LaCroix clearly teaches an insert having a triangular configuration. See Fig. 8. It also has a constant angle of inclination." Applicants respectfully submit that this response ignores the facts presented in the response after final and reproduced above, namely, the integral part of the mold shown in *LaCroix* does not meet the exemplary definition of a gusset as an insert. Hence, Applicants respectfully submit that a "gusset" has not been shown, and respectfully request that the rejection to claim 7 be overturned.

Further, the assertion in the FINAL Office Action that gussets are known based on a figure (*e.g.*, in *LaCroix*) that does not show a gusset would be improper, and thus Applicants respectfully repeat their request that such an assertion of well-known be withdrawn since the

FINAL Office Action and Advisory Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

Applicants respectfully submit that the addition of *Stuckey* does not remedy the above-mentioned deficiencies. The FINAL Office Action alleges the following in section 9c:

The Examiner asserts that inspection of the reference to *Stuckey* will show the claimed elements relied upon. *Stuckey* teaches an angular surface, which is both a projection and a bevel, on the shoe (the portion of the press which compresses the mixture) in Fig. 9, item 34. *Stuckey* provides an angled surface around the perimeter of the formed brick (Fig. 7), and the portion formed on the sides of the mold is still interpreted to be a side gusset. *Stuckey* teaches both a mold box and a shoe (the part which compacts the mixture) having the claimed elements.

Applicants respectfully disagree. With regard the FINAL Office Action interpretation of a “gusset,” for similar reasons presented above, Applicants submit that the mold box projections 30 do not equate to gussets as “inserts.” Thus, Applicants respectfully submit that **gussets** are not shown in *Stuckey*. With regard to the projections 34 of *Stuckey*, Applicants have reproduced *Stuckey* below (page 3, lines 42-48):

The mold 27 is supported in a suitable table 31 and disposed intermediately of opposing plungers or pistons 32 which carry plates 33 which are likewise provided with oppositely directed projections 34 which form the scores on the top and bottom of the slab 35 which is formed in this apparatus.

Applicants note from the above-citation and elsewhere in *Stuckey* (e.g., page 2, lines 38-40) that the purpose of the projections is to provide a fracture point for enabling the breaking of the brick and formation of rough surfaces. The fracture point also appears to serve as a decorative recess (e.g., page 2, lines 45-46). However, a projection does not necessarily form a **substantially constant angle of inclination** in the compressed mix. Applicants note that the above citation (and elsewhere in the specification of *Stuckey*) is devoid of any further explanation of the geometry of the projections 34, and thus respectfully submit that *Stuckey* fails to disclose, teach, or suggest at least **forming a substantially constant angle of inclination** as recited in claim 7. Thus, for similar reasons presented above, Applicants respectfully submit

that a “gusset” as that term is understood by those having ordinary skill in the art is not shown in *Stuckey*. Further, Applicants respectfully submit that a groove, as described in *Stuckey*, is not the same as a bevel, and that such a groove as described in *Stuckey* does not have a “**substantially constant angle of inclination**.” The Advisory Action dated December 19, 2006 replies to the above-argument on page 3, section (c) as follows:

The Examiner asserts that *Stuckey* provides a gusset. Applicants remarks appear to be drawn to the non-removability of *Stuckey*’s gusset as rationale for asserting that it is not a gusset. However, it is generally held to be prima facie obvious to make separable pieces such as those of *Stuckey*, and secondly, Applicants’ claimed method does not require the capability to remove the gussets, and does not remove gussets as a step of the process.

As to the first assertion, it is unclear if the response presented to Applicants in the Advisory Action is an apparent admission that the projection of *Stuckey* is not a gusset but instead acts like a gusset, which has not been an argument set forth previously, or that the projection is a gusset, the latter which Applicants repeat their assertion that the projection of *Stuckey* does not meet the exemplary definition for a gusset as provided above. As to the second assertion, Applicants respectfully submit that the response is not relevant to the question of whether the projection of *Stuckey* is a gusset or not. Accordingly, Applicants respectfully submit that the art of record fails to disclose, teach, or suggest the features of claim 7, and hence respectfully request that the rejection be overturned.

As to claim 8, and for similar reasons presented in association with claim 7, Applicants respectfully submit that the projections 34 as described in *Stuckey* are not gussets. Applicants respectfully note that *Stuckey* is devoid of any further explanation of the geometry of the projections 34, and thus respectfully submit that *Stuckey* fails to disclose, teach, or suggest at least **compressing the mix with an angular surface of the shoe** against an **angular surface of the opposing side gussets** as recited in claim 8, and further request that the rejection be overturned.

As to claims 7, 8, and 9-20 (which depend from claims 7 and 8), for similar reasons presented above in association with independent claim 1 and claims 2-5 and 23, Applicants respectfully submit that the proposed combination used to reject claims 7, 8, and 9-20 is not obvious, and hence request that the rejection to claims 7, 8, and 9-20 be overturned. The FINAL Office Action alleges the following on page 11:

The Examiner respectfully disagrees with the characterization of the references set forth in the applicant's remarks. The Examiner asserts that there is no teaching away from the elements relied upon in the rejection merely because one reference teaches dividing the blocks, and one does not. Both references provide desirable shaping features, namely bevels of different configurations.

Applicants respectfully disagree that there has been a mischaracterization of the references. For instance, Applicants respectfully submit that the characterization (in the non-final response) of *LaCroix* as "concerned with addressing the perceived problems associated with splitting techniques by incorporating a mechanism to provide a textured surface without the need for splitting" is fully supported in *LaCroix*. Referring to col. 1, lines 15-22 and col. 2, lines 62-67 (emphasis added):

(col. 1, lines 15-22) It is now also common to split off a portion of the cured masonry unit so as to create a decorative face on the unit. The splitting process creates an irregular texture, and exposes, and may actually break, some of the aggregate material in the composite. The face created by the splitting process is often referred to in the industry as "split face", or "rock face".

(col. 2, lines 62-67) The invention is a self-cleaning mold assembly which will produce a random, roughened texture face that does not evidence any "shingling" on a vertical side face of a masonry unit without a splitting step, so that the manufacturing process can operate without periodic cleaning or maintenance for extended production runs.

Applicants respectfully submit that since the characterization of the *LaCroix* reference is fully supported by the specification of *LaCroix*, no mischaracterization is evidenced from the last response.

Additionally, Applicants asserted in the non-final response that *Stuckey* "on the other hand, teaches the use of splitting techniques as an improvement over prior art techniques."

Applicants respectfully submit that such a characterization finds full support in *Stuckey*. For instance, page 1, lines 35-42 from *Stuckey* provides as follows (emphasis added):

By employing the method comprising my invention, it is possible to manufacture an artificial building block or brick which has one or more faces thereof of a true broken stone appearance due to the fact that this method contemplates employing the plane of fracture of the material from which the blocks are made as the decorative face of such blocks.

Applicants respectfully submit that since the characterization of the *Stuckey* reference is fully supported by the specification of *Stuckey*, no mischaracterization is evidenced from the last response.

With regard to teaching away, Applicants wish to make clear that what is being asserted is that it is not obvious to combine *Stuckey* with *LaCroix*. As is well established in the law, “[t]here is no suggestion to combine . . . if a reference teaches away from its combination with another source. . . A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant . . .” *Tec Air, Inc. v. Denso Manufacturing Michigan Inc.*, 192 F.3d 1353, 52 USPQ2d 1294 (Fed. Cir. 1999). Further, as provided in *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 U.S.P.Q. 416 (Fed. Cir. 1986), “[I]t is impermissible within the framework of 35 U.S.C. § 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.” Applicants respectfully submit that faced with such divergent methods as presented in *Stuckey* (splitting techniques) and *LaCroix* (against splitting techniques), there is no motivation to combine the two references.

C. Claims 9-20 (*Whissell, Batlle, LaCroix, Stuckey, Knipper, Rasmussen, and Wittke*)

Consistent with the “as a whole” explanation provided above, Applicants respectfully submit that for at least the reasons that the rejection to claim 1 is improper through improper combination of *Whissel* and *Batlle*, Applicants respectfully submit that claims 9-20 are also improper. Additionally, Applicants respectfully submit that the additional combination of *Knipper*, *Rasmussen*, and *Wittke* is also improper under an “as a whole inquiry.” For instance, Applicants’ claims to which *Rasmussen* is apparently applied refer to angular surfaces, and *Rasmussen* teaches dovetailed and concave surfaces. Further, and as mentioned above, *Knipper* is concerned with U-shaped molds for window frames, not the formation of **masonry units** with the configurations claimed by Applicants. Thus, Applicants respectfully submit that the combination of these divergent references are improper under an as a whole inquiry.

The Advisory Action alleges on page 3, section (I) that “Knipper pertains to concrete windows (See 1:55 and elsewhere), which can be considered masonry units. Rasmussen deals with concrete block molds, which can also be considered masonry units. No definition of masonry units is provided that would exclude the objects of these references.” Applicants respectfully disagree. Applicants note that MPEP 2111 requires the broadest reasonable interpretation for claim terms “in light of the specification as it would be interpreted by one of ordinary skill in the art.” Masonry units are explained in the background and specification (e.g., page 5), and Applicants respectfully submit that one having ordinary skill in the art would not equate the concrete window frames of *Knipper* with masonry units and that such an interpretation would be inconsistent with the specification and unreasonable. Thus, Applicants respectfully request that the rejection to claims 9-20 be overturned.

D. Claim 22 (*Whissell, Batlle, and Koyama*)

Applicants respectfully submit that the proposed combination of *Whissell*, *Batlle*, and *Koyama* is not obvious. For similar reasons presented above, Applicants respectfully submit

that at least since the proposed combination of *Whissell* and *Batlle* is improper, the rejection of claim 22 using the addition of *Koyama* to the proposed combination is improper at least by virtue of inheriting the improper combination of *Whissell* and *Batlle*. Accordingly, Applicants respectfully request that the rejection to claim 22 be overturned.

E. Claim 23 (*Whissell, Batlle, Knipper, Rasmussen, and Wittke*)

Applicants respectfully submit that the proposed combination of *Whissell, Batlle, Knipper, Rasmussen, and Wittke* is not obvious. For similar reasons presented above, Applicants respectfully submit that at least since the proposed combination of *Whissell* and *Batlle* is improper, the rejection of claim 23 using the addition of *Knipper, Rasmussen, and Wittke* to the proposed combination is improper as well. For instance, *Knipper* is concerned with a method and apparatus for making window frames (see title). Applicants are being asked to accept that one skilled in the art, armed with the problem of forming a masonry unit in a compression process with the various claimed effects/configurations, would go to window framing technology and pluck the teachings of *Knipper* without the benefit of hindsight reasoning. Applicants find such a position to be untenable.

Additionally, Applicants respectfully submit that the proposed combination of *Whissell, Batlle, Knipper, Rasmussen, and Wittke* is not obvious. For similar reasons presented above, Applicants respectfully submit that at least since the proposed combination of *Whissell* and *Batlle* is improper, the rejection of claim 23 using the addition of *Knipper, Rasmussen, and Wittke* to the proposed combination is improper as well.

Also, as explained above, Applicants respectfully submit that the proposed combination of *Knipper, Rasmussen, and Wittke* is also improper, at least for the reasons stated in association with claims 9-20. Accordingly, Applicants respectfully request that the rejection to claim 23 be overturned.

F. Claim 24 (*Whissell, Batlle, LaCroix, Stuckey, and Koyama*)

Applicants respectfully submit that the proposed combination of *Whissell, Batlle, LaCroix, Stuckey* and *Koyama* is not obvious. For similar reasons presented above in the discussion for claim 1, Applicants respectfully submit that at least since the proposed combination of *Whissell, Batlle, LaCroix*, and *Stuckey* is improper, the rejection of claim 24 using the addition of *Koyama* to the proposed combination is improper as well. Accordingly, Applicants respectfully request that the rejection be withdrawn.

For at least the forgoing reasons, it is Applicant's position that a *prima facie* for obviousness has not been made against Applicant's claims, and thus the rejections to claims 1-5, 7-20, and 22-24 should be overturned.

CONCLUSION

Based upon the foregoing discussion, Applicants respectfully request that the Examiner's final rejection of claims 1-5, 7-20, and 22-24 be overturned by the Board, and that the application be allowed to issue as a patent with all pending claims 1-5, 7-20, and 22-24.

In addition to the claims shown in the claims Appendix VIII, Appendix IX attached hereto indicates that there is no evidence being attached and relied upon by this brief. Appendix X attached hereto indicates that there are no related proceedings.

No fees are believed to be due in connection with this document. If, however, any additional fees are deemed to be payable, authorization is hereby given to charge any such fees to deposit account No. 20-0778.

Respectfully submitted,

/dr/

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VIII. CLAIMS - APPENDIX

1. A method for forming a masonry unit, said method comprising the steps of:

 raising a pallet to a bottom surface of a mold;

 inserting a filler plug into the side of the mold between a partition plate and a pallet;

 dispensing mix into the mold;

 compressing the mix with a shoe; and

 responsive to the compressing, forming a filler plug effect in the compressed mix

whereby a masonry unit having a filler plug effect is provided.
2. The method of claim 1, further including the step of removing the filler plug.
3. The method of claim 1, further including the step of stripping the architectural concrete masonry unit from the mold by lowering the pallet.
4. The method of claim 1, wherein the step of forming includes forming a bottom bevel in the compressed mix such that a masonry unit with a bottom bevel is formed.
5. The method of claim 1, wherein the step of forming includes forming a mortar buffer surface in the compressed mix such that a masonry unit with a mortar buffer surface is formed.
7. The method of claim 1, wherein the step of forming further includes forming a substantially constant angle of inclination between a front surface and opposing side surfaces, a top surface, and a bottom surface of the compressed mix corresponding to a masonry unit to be formed by compressing the mix with the shoe against opposing side gussets and the filler plug.
8. The method of claim 7, wherein the compressing the mix with the shoe against opposing side gussets and the filler plug includes compressing the mix with an angular

surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug.

9. The method of claim 8, wherein the compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with an approximately 30 degree angled surface referenced from a bottom surface of the filler plug.

10. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with an angular range of approximately 10-60 degrees, the range referenced from a bottom surface of the filler plug.

11. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with a width of approximately 7/32 inch.

12. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the filler plug effect in the compressed mix with a width in the range of approximately 1/16 inch – ½ inch.

13. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the

filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with an angle of approximately 30 degrees.

14. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with an angle in a range of approximately 10-60 degrees.

15. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with a width in the range of approximately 1/16 inch – ½ inch.

16. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angular surface between the front and top surfaces of the compressed mix with a width of approximately 7/32 inch.

17. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with an angle of approximately 30 degrees.

18. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with an angle in a range of approximately 120 – 170 degrees.

19. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with a width in the range of approximately 1/16 inch – ½ inch.

20. The method of claim 8, wherein compressing the mix with an angular surface of the shoe against an angular surface of the opposing side gussets and an angular surface of the filler plug includes forming the angled surface between the front and side surfaces of the compressed mix with a width of approximately 7/32 inch.

22. The method of claim 1, wherein the step of inserting a filler plug includes the step of inserting a plurality of filler plugs substantially simultaneously.

23. The method of claim 1, further including forming a bottom corner bevel in the compressed mix corresponding to at least one of a segmented retaining wall block, a concrete masonry unit, and an architectural concrete masonry unit by using a “T” portion of the filler plug, the “T” portion having a beveled surface.

24. A method for forming masonry units, said method comprising the steps of:
- raising a pallet to contact a bottom surface of a mold having gussets connected to internal surfaces of the mold;
 - inserting a plurality of filler plugs substantially simultaneously into the side of the mold between a plurality of partition plates and the pallet;
 - dispensing mix into the mold;
 - compressing the mix with a shoe; and
 - responsive to the compressing, forming a plurality of beveled-edge surfaces on the compressed mix corresponding to a masonry unit, the beveled-edge surfaces joining a front surface to a top surface, a bottom surface, and side surfaces.

IX. EVIDENCE - APPENDIX

(None)

X. RELATED PROCEEDINGS - APPENDIX

(None)